

# POLYPORACEAE FROM JAPAN

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The following interesting collection of Japanese polypores, seventy-one packets in all, was recently received for determination from Professors S. Kusano and S. Nohara, of the Agricultural College, Tokyo Imperial University. The Garden herbarium has formerly contained very little material in this group from Japan, and little has been known of the distribution of the species there, except through the published papers of Professor Hennings, of the Berlin Botanic Garden, who has reported the majority of the fifty or more species known to occur in Japan.

These specimens were collected in Tokyo (including Komaba), Iwaki, Shinano, Shimoosa, Kōnodai, Mt. Takao, Yoyogi, Nikko, Yumoto in Nikko, Oki Province, Formosa and Karafuto. The chief collectors were S. Kusano and S. Nohara, but the following names also appear: K. Miyake, Ch. Tanaka, K. Tanaka, T. Tanaka, Onuma, Yagi and Nakahara. The collector last mentioned obtained most of the specimens sent from Formosa and Karafuto.

Professors Kusano and Nohara are now planning to collect fungi in various parts of Japan on a larger scale, which seems highly desirable, as the mycological flora of Japan is apparently largely unknown at the present time.

## Tribe POLYPOREAE

BJERKANDERA ADUSTA (Willd.) Karst. Medd. Soc. Faun. Fl. Fenn. 5: 38. 1879.

Yoyogi, on dead trunk of *Celtis sinensis*, Nohara, 48. Tokyo, on some dead tree, Kusano & Nohara, 70.

BJERKANDERA FUMOSA (Pers.) Karst. Medd. Soc. Faun. Fl. Fenn. 5: 38. 1879.

Tokyo, on dead trunk of *Populus nigra pyramidalis*, Kusano & Nohara, 20; on *Populus nigra pyramidalis*, Onuma, 65.

COLTRICIA CINNAMOMEA (Jacq.) Murrill, Bull. Torrey Club 31:

343. 1904.

Tokyo, on the ground, Nohara, 57.

**Coriolellus Kusanoi** sp. nov.

Pileus small, dimidiate, sessile, laterally connate, broadly attached, slightly decurrent,  $1.3-2 \times 3-5 \times 0.2-0.5$  cm.; surface pale isabelline, sometimes brownish-discolored in places, glabrous, faintly zonate-sulcate; margin thin, acute, entire, concolorous, rigid, not inflexed on drying: context white, very thin, flexible; tubes concolorous within, about 3 mm. long behind, mouths slightly darker, angular, large, radially elongated, about  $2 \times 1$  mm., edges somewhat thick, rigid, entire: spores hyaline; hyphae hyaline,  $3-4 \mu$ ; cystidia none.

Type collected on dead *Cryptomeria japonica* at Sōma by S. Kusano, 51. Also collected on the same host at Tokyo by S. Nohara, 54b.

**CORIOLOPSIS BADIA** (Berk.) Murrill, Bull. Torrey Club 34: 466. 1907.

Karafuto, Nakahara, 53.

**CORIOLUS ABIETINUS** (Dicks.) Quél. Ench. Fung. 175. 1886.

This species has been confused by some with *Polystictus pellucidus* Berk. (Challenger No. 263), described from specimens collected in Japan on slender stems of herbaceous plants. The description of this latter species much resembles that of *C. abietinus*, but the habitat as given is entirely impossible for it.

Mt. Takao, T. Tanaka, 43. Tokyo, on dead *Cryptomeria*, Nohara, 45.

**CORIOLUS NIGROMARGINATUS** (Schw.) Murrill, Bull. Torrey Club 32: 649. 1906.

Tokyo, Nohara, 69; on *Prunus* sp., Kusano & Nohara, 41; on dead cherry tree, Kusano, 41a.

**CORIOLUS PROLIFICANS** (Fries) Murrill, N. Am. Flora 9: 27. 1907. Settsu, on a species of *Pinus*, Ch. Tanaka, 62.

**CORIOLUS VERSICOLOR** (L.) Quél. Ench. Fung. 175. 1886.

Iwaki, Kusano, 24. Tokyo, Ch. Tanaka, 63a, 63b.

**EARLIELLA CORRUGATA** (Pers.) Murrill, Bull. Torrey Club 34: 468. 1907.

Formosa, on some tree, Miyake, 22.

**FAVOLUS TENUIS** (Hook.) Murrill, Bull. Torrey Club 32: 100. 1905.

Formosa, Nakahara, 21.

HAPALOPILUS GILVUS (Schw.) Murrill, Bull. Torrey Club 31: 418.

1904. No. 10 is probably what Hennings has described as *Polyporus illicicola* (Engl. Bot. Jahrb. 32: 39. 1903). It differs from the ordinary forms of *H. gilvus* chiefly in its tomentose-asperate surface. No. 15a is an old resupinate specimen, with spores and cystidia corresponding to those of *H. gilvus*.

Tokyo, on dead *Cornus macrophyllus*, Kusano & Nohara, 10; on *Quercus* sp., Kusano & Nohara, 50. Nikko, on dead *Betula*, Kusano & Nohara, 15a.

INONOTUS RADIATUS (Sow.) Karst. Rev. Myc. 3<sup>9</sup>: 19. 1881.

Tokyo, on living *Prunus*, Ch. Tanaka, 60.

Irpiciporus consors (Berk.) Murrill. *Irpea consors* Berk. Jour.

Linn. Soc. Bot. 16: 51. 1878. Described from specimens collected at Kobi, Japan, on the Challenger expedition.

Tokyo, on dead stump of *Quercus*, Nohara, 47.

Irpiciporus japonicus sp. nov.

Pilei sessile, dimidiate, conchate, imbricate, united behind by mostly sterile tissue,  $0.3-0.7 \times 0.7-1 \times 0.1-0.3$  cm.; surface slightly zonate, glabrous, with silky luster, pale isabelline in dried specimens; margin thin, undulate, slightly inflexed on drying, ochraceous under a lens: context white, membranous; tubes large, irregular, angular, irpiciform at a very early stage, concolorous with the surface of the pileus, 1-3 to a mm., 3 mm. long behind, shorter in front, edges sharp, toothed: spores hyaline; hyphae hyaline,  $3-4 \mu$ ; cystidia none.

Type collected on dead *Quercus* at Tokyo in October, 1908, by S. Kusano and S. Nohara, 28.

IRPICIPORUS LACTEUS (Fries) Murrill, N. Am. Flora 9: 15. 1907.

Nikko, on a log of *Prunus* (?), Kusano & Nohara, 2.

Irpiciporus Noharae sp. nov.

Pileus semiresupinate, the resupinate portion nearly circular in outline, the reflexed portion dimidiate, thin, conchate, imbricate,  $1-1.5 \times 1.5-4 \times 0.1-0.2$  cm.; surface zonate-sulcate, hirsute-tomentose, avellanous-isabelline with pale fulvous markings; margin undulate, thin, concolorous, tomentose, inflexed on drying: context white, thin, flexible; tubes large and irregular, shallow, irpiciform at an early stage, white to slightly isabelline, 1-2 mm. long, 1-2 to a mm., edges sharp, irregular, crested and toothed: spores hyaline; hyphae hyaline; cystidia none.

Type collected on dead *Hibiscus syriacus* at Kōnodai, October, 1908, by S. Nohara, 49.

**Irpiciporus Tanakae** sp. nov.

Pileus sessile, conchate, imbricate, decurrent behind,  $1 \times 1-2 \times 1-0.3$  cm.; surface pure white, glabrous, nearly smooth, azoate, opaque; margin thin, entire, concolorous, slightly striate, strongly inflexed on drying: context white, membranous; tubes large, irregular, more or less radially confluent, pale isabelline, 1-2 mm. in diameter, about 2 mm. long behind, the decurrent edges longer, the dissepiments irregularly toothed, acute: spores elongated, smooth, hyaline; hyphae hyaline,  $2-3 \mu$ ; cystidia none.

Type collected on dead *Cryptomeria* on Mt. Takao by Ch. Tanaka, 54a.

**LAETIPORUS SPECIOSUS** (Battar.) Murrill, Bull. Torrey Club 31:

607. 1904.

Nikko, on *Tsuga* sp., Kusano & Nohara, 6.

**PIPTOPORUS SUBEROSUS** (L.) Murrill, Jour. Myc. 9: 94. 1903.

Nikko, Yumoto, on *Betula* sp., Kusano, 27.

**POLYPORUS ARCULARIUS** (Batsch.) Fries, Syst. Myc. 1: 342. 1821.

Tokyo, on *Prunus* sp., Kusano & Nohara, 46.

**POLYPORUS CELEBICUS** P. Henn. Monsunia 1: 12. pl. 1. f. 5. 1899.

Tokyo, on stump of *Quercus glandulifera*, Kusano & Nohara, 1.

**POLYPORUS PERULA** (Beauv.) Fr. Epicr. 437. 1838.

Formosa, on a root of some dead tree, Nakahara, 7.

**PYCNOPORUS SANGUINEUS** (L.) Murrill, Bull. Torrey Club 31:

421. 1904.

Tokyo, on dead stem of *Prunus* sp., Kusano & Nohara, 13.

Formosa, on *Pandanus* sp., Nakahara, 19.

**TRAMETES DICKINSII** Berk. Sacc. Sylloge Fung. 9: 196. 1891.

Collected by Dickins in Japan and named by Berkeley, but not published until the diagnosis was sent to Saccardo by Cooke. It must not be confused with *Polyphorus Dickinsii* Berk. (Jour. Linn. Soc. Bot. 16: 50. 1878), also from Japan, which is very different, being very thin and having large, shallow tubes. *Trametes nitida* Pat. (Jour. de Bot. 4: 17. 1890), described from Tonkin, is a resupinate form very much resembling *Tr. Dickinsii*.

Nikko, on dead *Quercus aliena*, Kusano & Nohara, 3. Oki Province, Kusano & Nohara, 26.

TRAMETES MÜLLERI Berk. Jour. Linn. Soc. Bot. 10: 320. 1868.  
Formosa?, Nakahara?, 36.

Whitfordia musashiensis (P. Henn.). *Fomes musashiensis* P. Henn. Engl. Bot. Jahrb. 31: 737. 1902.  
Shibuya, near Tokyo, Ch. Tanaka, 59.

#### Tribe FOMITEAE

ELFVINGIA FOMENTARIA (L.) Murrill, Bull. Torrey Club 30: 298. 1903. Most of the specimens represent the form common in southern Europe.

Nikko, on dead *Betula* sp., *Kusano & Nohara*, 5, 18, 38; on some dead tree, *Kusano & Nohara*, 15. Karafuto, *Nakahara*, 31, 34.

ELFVINGIA LIPSIENSIS (Batsch) Murrill, Bull. Torrey Club 30: 297. 1903. No. 29 is an indurated, almost resupinate form, having the young hymenium covered with a yellow layer, as sometimes occurs in *E. megaloma* and *E. tornata*.

Nikko, on dead *Betula* sp.?, *Kusano & Nohara*, 14. Shimoosa, *Onuma*, 32. Tokyo, *Kusano*, 52; on *Ailanthus glandulosa*, *Onuma*, 30. Shinano, on *Prunus* sp., *Yagi*, 29.

ELFVINGIA TORNATA (Pers.) Murrill, Bull. Torrey Club 30: 301. 1903.  
Formosa, *Miyake*, 39.

FOMES FRAXINEUS (Bull.) Cooke, Grevillea 14: 21. 1885. This species is usually found on ash in Europe and America.

Tokyo, on a cherry tree, *Nohara*, 55. Shinano, on *Prunus*, *K. Tanaka*, 11. Locality not stated, *Kusano & Nohara*, 35.

FOMES UNGULATUS (Schaeff.) Sacc. Syll. Fung. 6: 167. 1888.  
Locality not stated, *Nakahara*, 25. Karafuto, *Nakahara*, 33.

GANODERMA AMBOINENSE (Lam.) Pat. Bull. Soc. Myc. Fr. 5: 70. 1889.  
Nikko, on some dead tree, *Kusano & Nohara*, 8.

GANODERMA FLABELLIFORME (Scop.) Murrill, Torreya 4: 165. 1904. The specimen is old and the host is not given, thus leaving the determination somewhat in doubt.

Nikko, Yumoto, *Kusano*, 37.

PYROPOLYPORUS FASTUOSUS (Lév.) Murrill, Bull. Torrey Club **34**:

479. 1907.

Formosa, on dead tree, *Nakahara*, 9.

Tribe DAEDALEAE

CERRENA UNICOLOR (Bull.) Murrill, Jour. Myc. **9**: 91. 1903.

Tokyo, on dead limbs of *Styrax Obassia*, *Kusano & Nohara*, 4.

CYCLOMYCES FUSCUS Fr. Linnaea **5**: 512. *pl. 11. f. 3.* 1830. Japan is rather far north for this species.

Tokyo, on *Pasama cuspidata*, *Nohara*, 67.

**Daedalea Kusanoi** sp. nov.

Pileus sessile, dimidiate, applanate or slightly convex above, plane or convex below, somewhat imbricate, slightly decurrent,  $3-4 \times 5-6 \times 1.5-2$  cm.; surface very slightly sulcate, nearly glabrous, very pale isabelline; margin entire or undulate, acute, rigid, not inflexed on drying, concolorous: context white or nearly white, corky, homogeneous, 3-5 mm. thick; tubes labyrinthiform, pale isabelline, nearly 1 cm. long behind, the furrows 0.5-2 cm. long and 1-2 mm. broad, edges thick, obtuse, entire, somewhat uneven; spores subglobose to ovoid, smooth, hyaline; hyphae hyaline,  $4-6 \mu$  thick; cystidia none.

Type collected on a dead trunk in the Botanical Garden at Tokyo in 1901 by S. Kusano, 40, 64 (*duplicate*).

GLOEOPHYLLUM TRABEUM (Pers.) Murrill, N. Am. Flora **9**: 129. 1908.

Tokyo, on dead *Cryptomeria japonica*, *Kusano & Nohara*, 17; on *Cryptomeria japonica*, half-burned log, *Nohara*, 44.

LENZITES BETULINA (L.) Fries, Epicr. Myc. 405. 1838.

Shinano, on stump of a dead willow, K. Tanaka, 12. Iwaki, Kusano, 23. Tokyo, on old rail, *Kusano & Nohara*, 68.

ADDITIONAL SPECIES REPORTED FROM JAPAN

The following list contains the principal pileate species of Polyporaceae reported from Japan, which are not included above. Since the determinations have not been verified except in a few cases, no attempt is here made to group the species in accordance with my own classification.

*Irpea decurrentis* Berk., *Irpea Kusanoi* P. Henn. & Shir.; *Hyd-*

*nofomes tsugicola* P. Henn.; *Polyporus membranaceus* (Sw.) Fr., *Polyporus cinnabarinus* (Jacq.) Fr., *Polyporus pellucidus* Berk., *Polyporus ochrotinctus* Berk., *Polyporus vernicipes* Berk., *Polyporus Dickinsii* Berk., *Polyporus Pocas* Berk., *Polyporus Pocula* (Schw.) B. & C., *Polyporus officinalis* (Vill.) Fr., *Polyporus Schweinitzii* Fr., *Polyporus glaucotus* Cooke, *Polyporus illicicola* P. Henn., *Polyporus Shiraianus* P. Henn. (==*Pycnoporellus fibrillosus* (Karst.) Murrill), *Polyporus Shenoi* P. Henn.; *Polystictus Cryptomeriae* P. Henn., *Polystictus Ikenoi* P. Henn.; *Trametes styracicola* P. Henn.

*Fomes fulvus* (Fr.) Gill., *Fomes rimosus* (Berk.) Cooke, *Fomes igniarius* (L.) Gill., *Fomes Ribis* (Schum.) Gill., *Fomes volvatus* (Peck) Cooke, *Fomes concentricus* Cooke, *Fomes japonicus* (Fr.) Cooke; *Daedalea quercina* Pers., *Daedalea styracina* P. Henn. & Shir.; *Lenzites japonica* Berk., *Lenzites alutacea* Cooke, *Lenzites saepiaria* (Wulf.) Fr., *Lenzites variegata* Fr.

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